

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

Met	Asp	Gly	Lys	Ser	Lys	Met	Gln	Ala	Glu	Lys	His	Leu	Thr	Gly	Thr
1				5					10					15	
Leu	Val	Leu	Ser	Val	Phe	Thr	Ala	Val	Leu	Gly	Phe	Phe	Gln	Tyr	Gly
			20					25					30		
Tyr	Ser	Leu	Gly	Val	Ile	Asn	Ala	Pro	Gln	Lys	Val	Ile	Glu	Ala	His
		35					40					45			
Tyr	Gly	Arg	Met	Leu	Gly	Ala	Ile	Pro	Met	Val	Arg	His	Ala	Thr	Asn
	50					55				60					
Thr	Ser	Arg	Asp	Asn	Ala	Thr	Ile	Thr	Val	Thr	Ile	Pro	Gly	Thr	Glu
65				70					75					80	
Ala	Trp	Gly	Ser	Ser	Glu	Gly	Thr	Leu	Ala	Pro	Ser	Ala	Gly	Phe	Glu
			85					90					95		
Asp	Pro	Thr	Val	Ser	Pro	His	Ile	Leu	Thr	Met	Tyr	Trp	Ser	Leu	Ser
			100					105					110		
Val	Ser	Met	Phe	Ala	Val	Gly	Gly	Met	Val	Ser	Ser	Phe	Thr	Val	Gly
		115				120						125			
Trp	Ile	Gly	Asp	Arg	Leu	Gly	Arg	Val	Lys	Ala	Met	Leu	Val	Val	Asn
	130					135					140				
Val	Leu	Ser	Ile	Ala	Gly	Asn	Leu	Leu	Met	Gly	Leu	Ala	Lys	Met	Gly
145				150					155					160	
Pro	Ser	His	Ile	Leu	Ile	Ile	Ala	Gly	Arg	Ala	Ile	Thr	Gly	Leu	Tyr
			165					170						175	
Cys	Gly	Leu	Ser	Ser	Gly	Leu	Val	Pro	Met	Tyr	Val	Ser	Glu	Val	Ser
		180					185					190			
Pro	Thr	Ala	Leu	Arg	Gly	Ala	Leu	Gly	Thr	Leu	His	Gln	Leu	Ala	Ile
		195				200					205				
Val	Thr	Gly	Ile	Leu	Ile	Ser	Gln	Val	Leu	Gly	Leu	Asp	Phe	Leu	Leu
	210					215					220				
Gly	Asn	Asp	Glu	Leu	Trp	Pro	Leu	Leu	Leu	Gly	Leu	Ser	Gly	Val	Ala
225				230					235					240	
Ala	Leu	Leu	Gln	Phe	Phe	Leu	Leu	Leu	Leu	Cys	Pro	Glu	Ser	Pro	Arg
			245					250					255		
Tyr	Leu	Tyr	Ile	Lys	Leu	Gly	Lys	Val	Glu	Glu	Ala	Lys	Lys	Ser	Leu
		260					265						270		
Lys	Arg	Leu	Arg	Gly	Asn	Cys	Asp	Pro	Met	Lys	Glu	Ile	Ala	Glu	Met
		275				280						285			
Glu	Lys	Glu	Lys	Gln	Glu	Ala	Ala	Ser	Glu	Lys	Arg	Val	Ser	Ile	Gly
	290					295					300				
Gln	Leu	Phe	Ser	Ser	Ser	Lys	Tyr	Arg	Gln	Ala	Val	Ile	Val	Ala	Leu
305				310					315					320	
Met	Val	Gln	Ile	Ser	Gln	Gln	Phe	Ser	Gly	Ile	Asn	Ala	Ile	Phe	Tyr
			325					330					335		
Tyr	Ser	Thr	Asn	Ile	Phe	Gln	Arg	Ala	Gly	Val	Gly	Gln	Pro	Val	Tyr
		340					345						350		
Tyr	Ala	Thr	Ile	Gly	Val	Gly	Val	Val	Asn	Thr	Val	Phe	Thr	Val	Ile
	355					360					365				
Ser	Val	Phe	Leu	Val	Glu	Lys	Ala	Gly	Arg	Arg	Ser	Leu	Phe	Leu	Ala
	370					375					380				
Gly	Leu	Met	Gly	Met	Leu	Ile	Ser	Ala	Val	Ala	Met	Thr	Val	Gly	Leu
385				390					395					400	
Val	Leu	Leu	Ser	Gln	Phe	Ala	Trp	Met	Ser	Tyr	Val	Ser	Met	Val	Ala
			405					410					415		
Ile	Phe	Leu	Phe	Val	Ile	Phe	Phe	Glu	Val	Gly	Pro	Gly	Pro	Ile	Pro
	420						425					430			
Trp	Phe	Ile	Val	Ala	Glu	Leu	Phe	Ser	Gln	Gly	Pro	Arg	Pro	Ala	Ala
	435					440						445			
Ile	Ala	Val	Ala	Gly	Phe	Cys	Asn	Trp	Ala	Cys	Asn	Phe	Ile	Val	Gly
	450					455					460				

Met	Cys	Phe	Gln	Tyr	Ile	Ala	Asp	Leu	Cys	Gly	Pro	Tyr	Val	Phe	Val
465					470					475					480
Val	Phe	Ala	Val	Leu	Leu	Leu	Val	Phe	Phe	Leu	Phe	Ala	Tyr	Leu	Lys
			485						490						495
Val	Pro	Glu	Thr	Lys	Gly	Lys	Ser	Phe	Glu	Glu	Ile	Ala	Ala	Ala	Phe
			500					505						510	
Arg	Arg	Lys	Lys	Leu	Pro	Ala	Lys	Ser	Met	Thr	Glu	Leu	Glu	Asp	Leu
		515					520						525		
Arg	Gly	Gly	Glu	Glu	Ala										
530															

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 494 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Met	Gly	Thr	Thr	Lys	Val	Thr	Thr	Pro	Leu	Ile	Phe	Ala	Ile	Ser	Ile
1				5					10					15	
Ala	Thr	Ile	Gly	Ser	Phe	Gln	Phe	Gly	Tyr	Asn	Thr	Gly	Val	Ile	Asn
			20					25					30		
Ala	Pro	Glu	Ala	Ile	Ile	Lys	Asp	Phe	Leu	Asn	Tyr	Thr	Leu	Glu	Glu
			35				40					45			
Arg	Ser	Glu	Thr	Pro	Pro	Ser	Ser	Val	Leu	Leu	Thr	Ser	Leu	Trp	Ser
	50					55					60				
Leu	Ser	Val	Ala	Ile	Phe	Ser	Val	Gly	Gly	Met	Ile	Gly	Ser	Phe	Ser
	65				70				75						80
Val	Gly	Leu	Phe	Val	Asn	Arg	Phe	Gly	Arg	Arg	Asn	Ser	Met	Leu	Ile
				85				90						95	
Val	Asn	Leu	Leu	Ala	Ile	Ala	Gly	Gly	Cys	Leu	Met	Gly	Phe	Cys	Lys
			100				105					110			
Ile	Ala	Glu	Ser	Val	Glu	Met	Leu	Ile	Leu	Gly	Arg	Leu	Ile	Ile	Gly
	115					120					125				
Leu	Phe	Cys	Gly	Leu	Cys	Thr	Gly	Phe	Val	Pro	Met	Tyr	Ile	Gly	Glu
	130					135					140				
Ile	Ser	Pro	Thr	Ala	Leu	Arg	Gly	Ala	Phe	Gly	Thr	Leu	Asn	Gln	Leu
	145				150				155						160
Gly	Ile	Val	Ile	Gly	Ile	Leu	Val	Ala	Gln	Ile	Phe	Gly	Leu	Lys	Val
			165					170						175	
Ile	Leu	Gly	Thr	Glu	Asp	Leu	Trp	Pro	Leu	Leu	Leu	Gly	Phe	Thr	Ile
			180					185					190		
Leu	Pro	Ala	Ile	Ile	Gln	Cys	Ala	Ala	Leu	Pro	Phe	Cys	Pro	Glu	Ser
		195				200						205			
Pro	Arg	Phe	Leu	Leu	Ile	Asn	Arg	Lys	Glu	Glu	Glu	Lys	Ala	Lys	Glu
	210					215					220				
Ile	Leu	Gln	Arg	Leu	Trp	Gly	Thr	Glu	Asp	Val	Ala	Gln	Asp	Ile	Gln
	225				230				235						240
Glu	Met	Lys	Asp	Glu	Ser	Met	Arg	Met	Ser	Gln	Glu	Lys	Gln	Val	Thr
			245					250						255	
Val	Leu	Glu	Leu	Phe	Arg	Ala	Pro	Asn	Tyr	Arg	Gln	Pro	Ile	Ile	Ile
			260					265					270		
Ser	Ile	Met	Leu	Gln	Leu	Ser	Gln	Gln	Leu	Ser	Gly	Ile	Asn	Ala	Val
		275				280						285			
Phe	Tyr	Tyr	Ser	Thr	Gly	Ile	Phe	Lys	Asp	Ala	Gly	Val	Gln	Glu	Pro
	290				295						300				
Val	Tyr	Ala	Thr	Ile	Gly	Ala	Gly	Val	Val	Asn	Thr	Ile	Phe	Thr	Val
305					310					315					320

[illegible]